TBA FIREFLY

PASSIVE FIRE PROTECTION

INTUBATT

FLOOR/CEILING SYSTEM & BOXOUT SYSTEM FOR

FRL 120/120/120

RISF 120

INSTALLATION GUIDE

ESTABLISHED IN 1875
PROUDLY SERVING AUSTRALIAN INDUSTRY FOR OVER 50 YEARS

Intubatt Floor/Ceiling System Installation

For sales and technical support please go to:
www.tbafirefly.com.au
Tel: 07 5411 4209

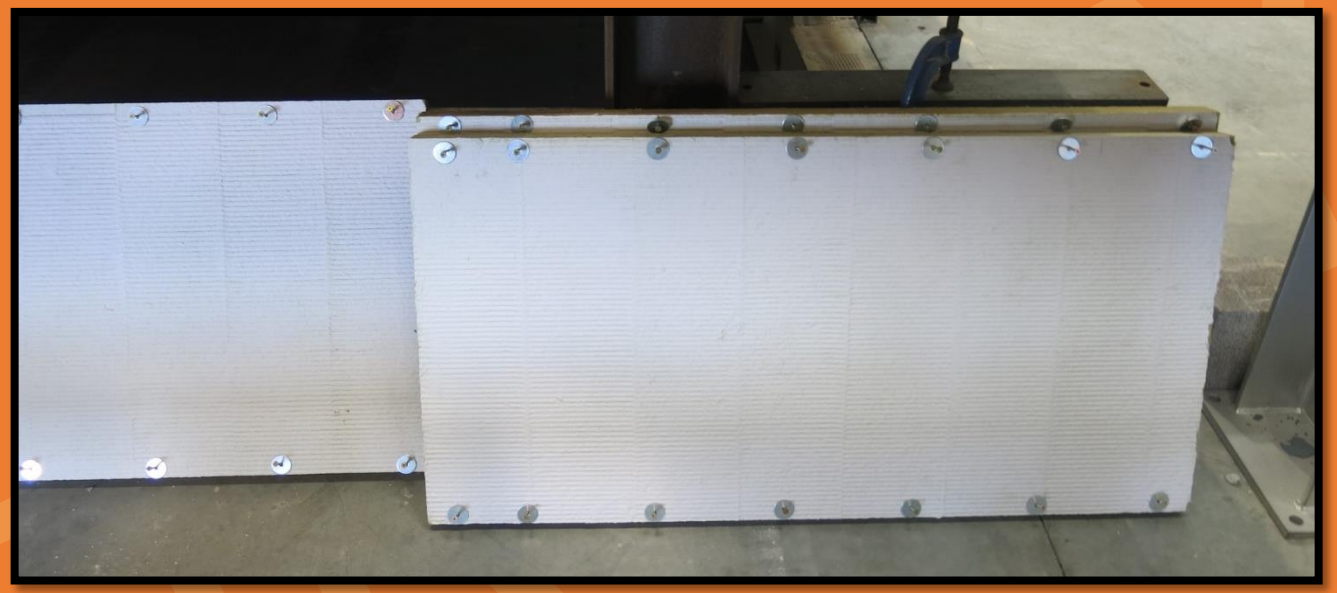
Frame Installed

The frame may be made of timber or steel, the key criteria is that the centers of the joists are spaced at 600mm centers.

Initial Fix

The first layer of Intubatt is fixed using 75mm drywall screws with penny washers.

1. The screws and penny washers are pushed into the Intubatt by hand, push them in approximately 25/30 mm down both of the long edges of the Intubatt as shown.
2. They are spaced 25mm in from the edge, nominally 150mm apart from each other and a maximum of 50mm from the ends.
3. Angle the screws in to enable you to pick up the joist/purlin.



Painting The Edges

Pre-paint the edge of the first row of Intubatts where they butt up to the head/side of existing wall, using a generous coating of Intumastic Brush Grade mastic.

Painting The Edges

Once the first Intubatt is installed, paint the exposed edge with a generous coating of Intumastic Brush Grade.

Butting The Intubatts

Butt up the next Intubatt to the first, ensuring that some of the Intumastic squeezes out of the joint, then continue to screw them up flush.

Stagger The Joints

Stagger the longitudinal joints with a minimum 200mm stagger. All joint and abutments must be buttered up with the Intumastic Brush Grade, during the install. DO NOT fix them with a dry joint then put a bead of mastic onto the face of the joint as this both defeats the purpose and would also make it a non-compliant install.

Completed First Layer

Once the first layer of Intubatt is installed, run your brush down the face of all of the joints to ensure a flush finish, with large ceilings, we would recommend that this is done as you go along to prevent the mastic going off and leaving a jagged finish on all of the joints.

Installing the Second Layer of Intubatt

The second layer of Intubatt is laminated to the first layer, using Intumastic and 90mm long pig-tail screws. The pig-tail screws are fixed at 150mm centers around the perimeter of the board with an additional one in the middle of the board. Ensure that this second layer is installed with a minimum of 200mm stagger from the joints on the first layer.

Pig-Tail Screw:

Buttering Up The Joints

Butter up the exposed side of the Intubatt that is already installed using a generous coating of Intumastic Brush Grade.

Buttering Up The Joints

Butter the edge up just enough so that it is ready to take the next 1200mm long by 600mm wide sheet of Intubatt. Don’t apply to a larger area as it is likely to dry before applying the next Intubatt.

Butting up the Intubatt

Only one of the abutting faces of Intubatt require the coating of Intumastic Brush Grade. It's easier and a lot less mess to coat up the one that is already installed. As you can see from this picture, the pig-tail screws have already been hand screwed into the Intubatt, penetrating approximately 25mm into the Intubatt.

Screwing In The Pig-Tail Screws

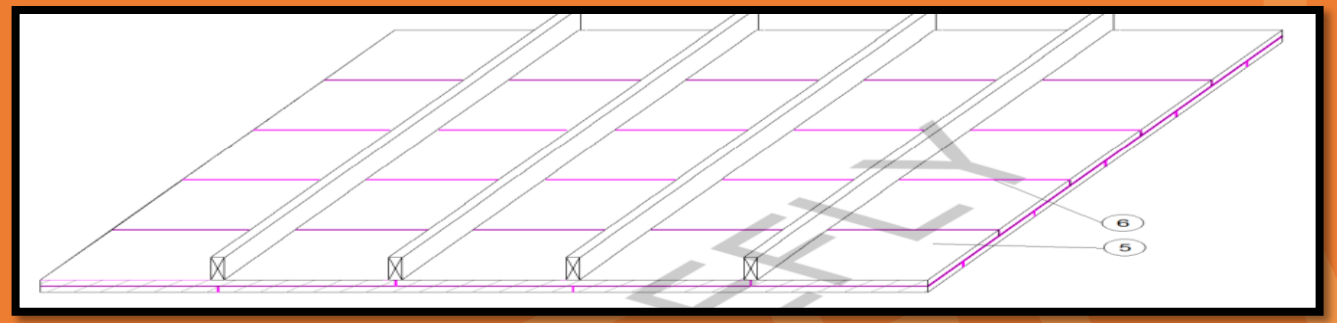
Once the Intubatt is butted up tight simply screw in the pig-tail screws using a battery drill and Philips screw head.

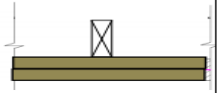
Completed Floor Ceiling On Site Installation

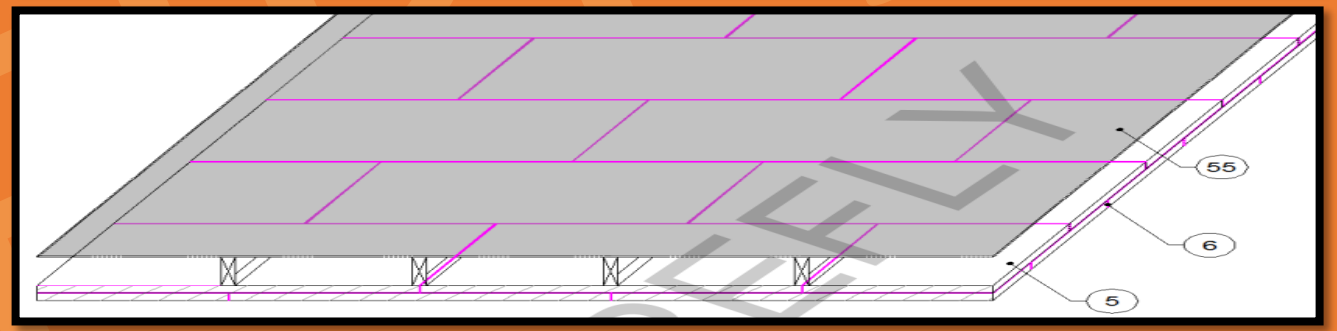
Ideal solution for retro-fitting plant room ceilings where services are already installed.

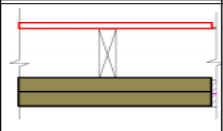
Fire From Underside

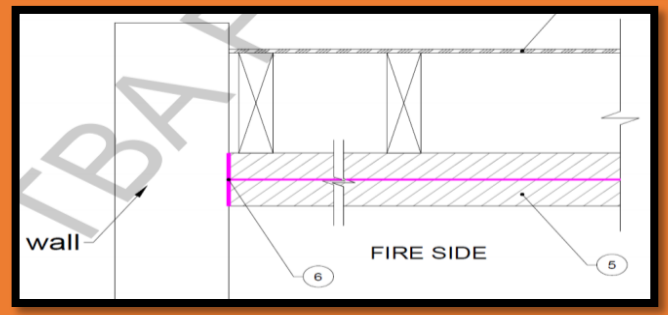
For protecting the underside of a ceiling or floor ceiling please refer to Exova RIR 27186 for all fully compliant construction and protection applications and details.

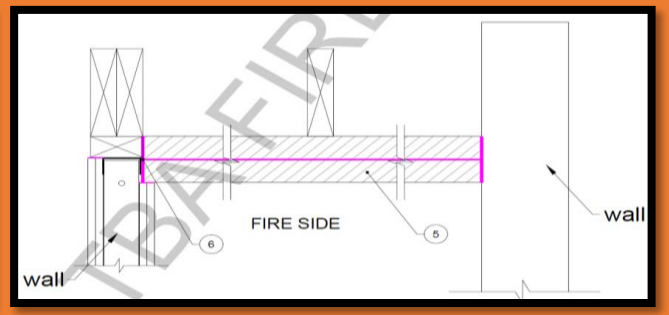


Floor/Ceiling System	2 × 50mm Intubatt	Fixed under timber joist		-	-	All joints sealed with Firetherm Intumescent mastic	69 & 70b	120/120/120 fire from below only RISF 120 mins



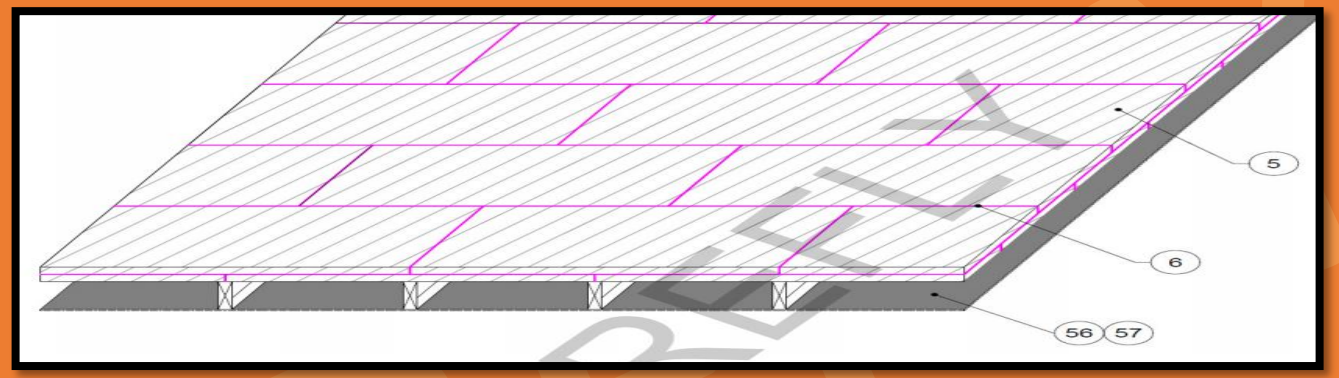
Floor/Ceiling System	2 × 50mm Intubatt	Fixed under timber joist		-	-	All joints sealed with Firetherm Intumescent mastic	69 & 70	120/120/120 fire from below only RISF 120 mins

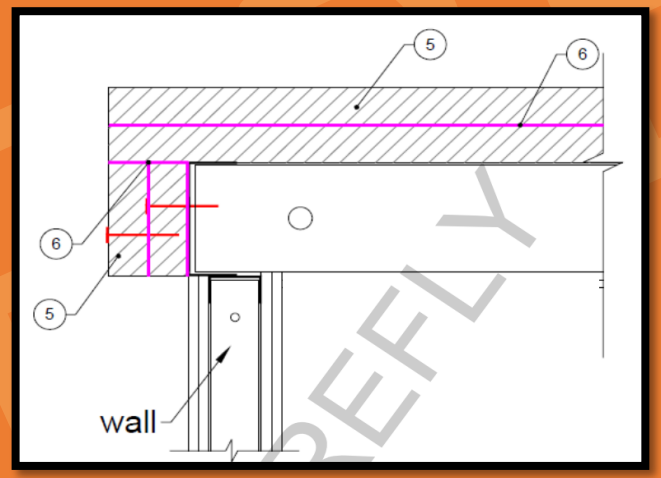


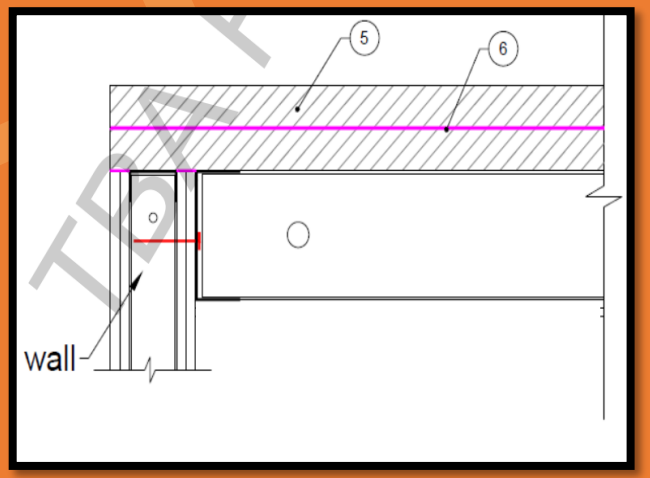


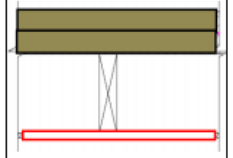
Fire From Outside/In

For capping off stairwells, lift shafts, and fire isolated corridors, simply install the double layer of Intubatt on top of the framework to protect the areas from fire from outside/in. Please refer to Exova RIR 27186 for all fully compliant construction and protection applications and details.







Floor/Ceiling System	2 × 50mm Intubatt	Fixed over timber joist + non-fire rated plaster-board		-	-	All joints sealed with Firetherm Intumescent mastic	71 & 72b	120/120/120 fire from topside only and supporting self weight of batt only

Intubatt Boxout System Installation

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Installing The Intubatt Boxout

Install a vertical layer of Intubatt by screw fixing into the side of the existing timber/steel joist using 75mm drywall screws and penny washers, fixed at 150mm centers.

Alternatively, mechanically fix a 50mm by 50mm by 1.2 gauge, galvanised steel angle to the underside of the existing fire rated floor/ceiling system. This will give you a 50mm leg of the angle to fix the Intubatt to. Fix the Intubatt to the lip of the angle using 75mm self tapping drywall screws at 150mm centers.

Notching Out

Notch the Intubatt out around the noggins/supports as shown in picture to the right.

Intubatt Hanging Vertically

The Intubatt is now hanging vertically, all abutments and joints are to be painted using the Intumastic Brush Grade.

Fixing To The Face of Existing Wall

Mechanically fix a length of timber or 50mm by 50mm galvanised steel angle to the wall. So that the underside lip/face is 50mm higher than the underside of the vertically installed Intubatt shown in the picture. Run a bead of Intumastic along the underside of the timber or steel angle.

Buttering Up The Corners

Paint up 50mm from the bottom of the vertical Intubatt, using a generous amount of Intumastic Brush Grade. So that it’s ready to receive the horizontal Intubatt butted up to it.

Installing The Horizontal Intubatt

1. Screw fix the Intubatt to the timber beam or 50mm by 50mm by 1.2 gauge galvanised steel angle using 75mm drywall screws/self tapper and penny washers at 150mm centers.
2. Fix the horizontal and vertical Intubatts at their corner junction using 90mm long pig-tail screws and Intumastic at 100mm centers.

Fixing The Pig-Tail Screws

Hand wind the pig-tail screws approximately 10mm into the Intubatt at 100mm centers.

Buttering Up

Continue to butter up all joints and abutments as you go along using a generous amount of Intumastic Brush Grade.

Driving The Pig-Tails Home

Drive the pig-tail screws home using a battery drill with a Philips head on it. Please ensure that there are no gaps between the abutments/joints.

Repeat the process by laminating a second layer of Intubatt to the first ensuring the corners are staggered by 50mm and the other joints are staggered by a minimum of 200mm.

Completed Horizontal Boxout

Once the second layer of Intubatt is installed paint over all of the green on the edges so that only white can be seen.

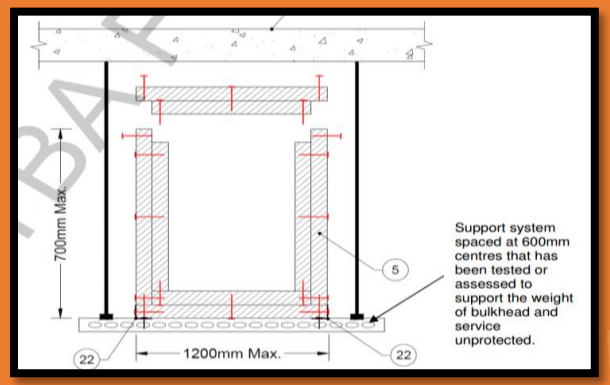
The images below show a typical on site installation

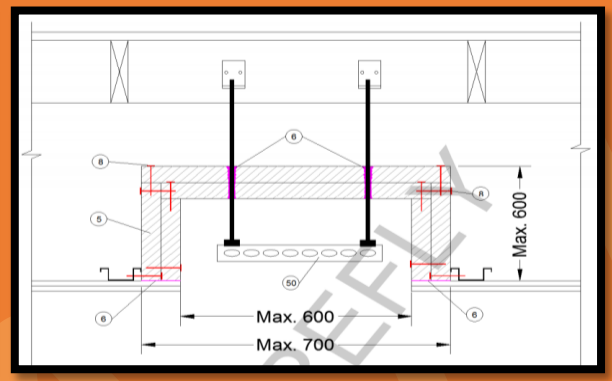
Intubatt Boxouts and Shafts Both Vertical and Horizontal

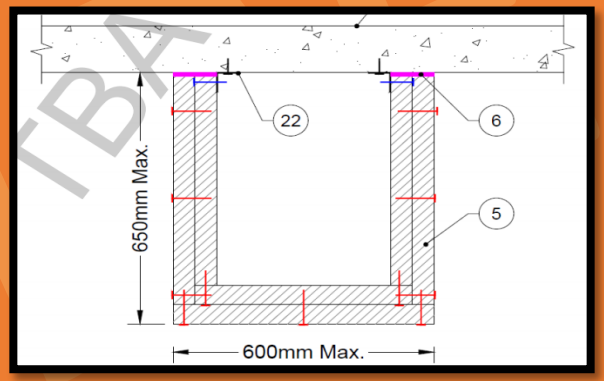
Our double layer Intubatt systems can be used to make both horizontal and vertical boxouts/shafts. Dependent on the construction details contained in Exova RIR 27186, the following fire protection can be achieved.

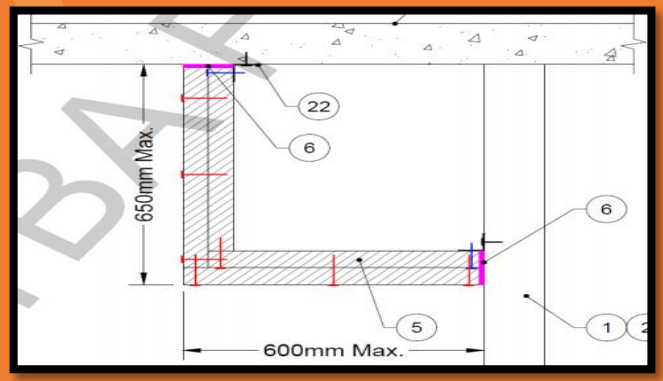
1. Fire from Inside-Out only.
2. Fire from Outside-In only.
3. 2 way Fire from Inside-Out and Outside-In.
4. Vertical Risers Shafts.
5. Horizontal Boxouts.

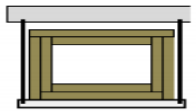
Intubatt Horizontal Boxout Bulkheads

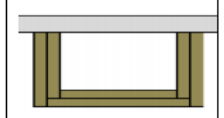


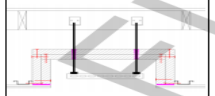


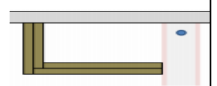




Not Framed Bulkhead	2 × 50mm Intubatt supported by hanging system	Fixed to framing at perimeter and supported by cable tray, 4 sides		Max. 1200mm wide, max. 700mm high, no limit on length	Concrete or Hebel floor, Concrete, masonry, Hebel or framed wall	All joints sealed with Firetherm Intumescent mastic	59	120/120/120 from inside only Supporting self weight of barrier only RISF 120 mins

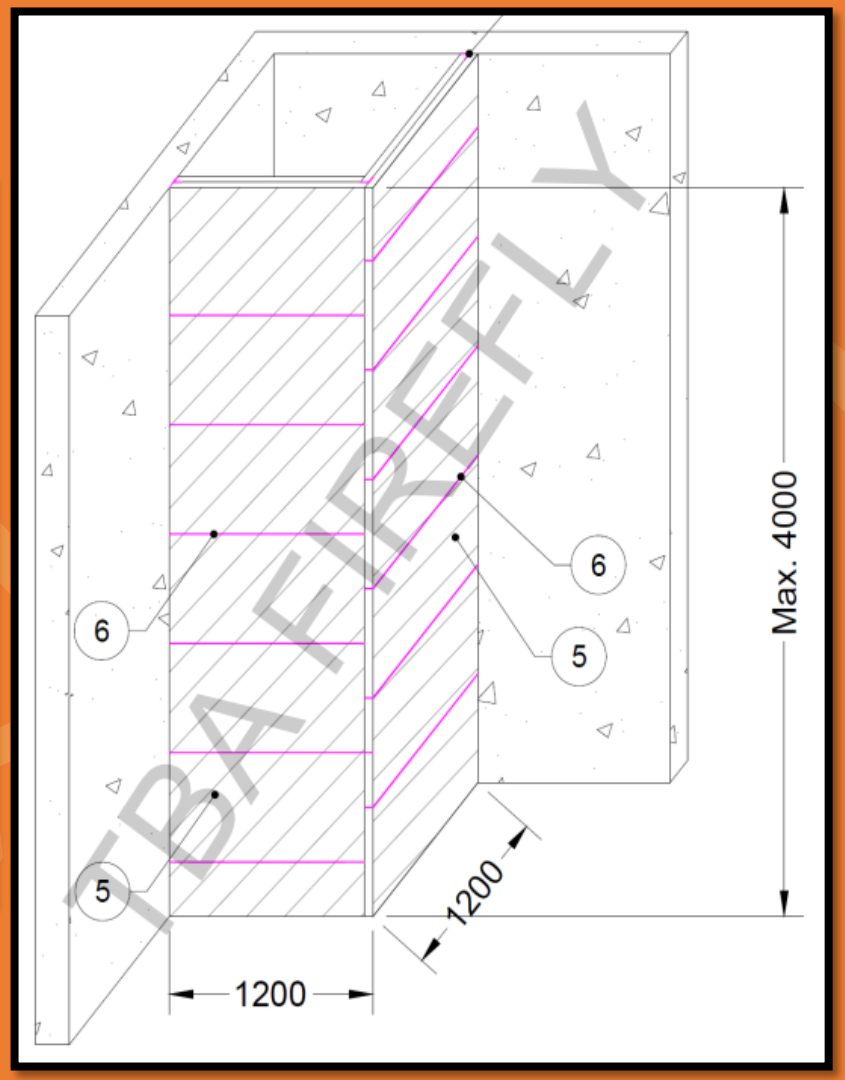
Framed Bulkhead	2 × 50mm Intubatt fixed to a framework	Fixed to framing at perimeter 3 sides		Max. 600mm wide, max. 650mm high, no limit on length	Concrete or Hebel floor, Concrete, masonry, Hebel or framed wall	Fixed to framing at perimeter All joints sealed with Firetherm Intumescent mastic	60	120/120/120 Supporting self weight of barrier only RISF 120 mins

Framed Bulkhead	2 × 50mm Intubatt	Fixed to framing covered with angles at perimeter 3 sides		Max. 600mm wide, max. 600mm high, no limit on length	Plaster-board lined ceiling/ floor system	Fixed to framing at perimeter All joints sealed with Firetherm Intumescent mastic	75a	120/120/120 fire from below only and supporting self weight of batt only RISF 120 mins

Not Framed Bulkhead	2 × 50mm Intubatt + Angle fixed to a framework	Fixed to framing covered with angles at perimeter 2 sides		Max. 600mm wide, max. 650mm high, no limit on length	Concrete or Hebel floor, Concrete, masonry, Hebel or framed wall	Fixed to framing at perimeter All joints sealed with Firetherm Intumescent mastic	58	120/120/120 Supporting self weight of barrier only RISF 120 mins

Intubatt Vertical Boxout and Riser Shafts

Three sided vertical riser shown in image above



Vertical Riser- 4 Sides	2 × 50mm Intubatt	Fixed at perimeter 4 sides		Max. 1200mm wide, max. 4m high	Concrete, masonry, Hebel or framed wall	Fixed to framing at perimeter All joints sealed with Firetherm Intumescent mastic	76 & 77	120/120/120 Supporting self weight of barrier only
Vertical Riser 3 Sides	2 × 50mm Intubatt	Fixed at perimeter 3 sides		Max. 1200mm wide, max. 4m high	Concrete, masonry, Hebel or framed wall	Fixed to framing at perimeter All joints sealed with Firetherm Intumescent mastic	76 & 78	120/120/120 Supporting self weight of barrier only
Vertical Riser 2 Sides	2 × 50mm Intubatt	Fixed at perimeter 2 sides		Max. 1200mm wide, max. 4m high	Concrete, masonry, Hebel or framed wall	Fixed to framing at perimeter All joints sealed with Firetherm Intumescent mastic	76 & 79	120/120/120 Supporting self weight of barrier only
Vertical Riser 1 Side	2 × 50mm Intubatt	Fixed at perimeter 2 sides		Max. 1200mm wide, max. 4m high	Concrete, masonry, Hebel or framed wall	Fixed to framing at perimeter All joints sealed with Firetherm Intumescent mastic	76 & 80	120/120/120 Supporting self weight of barrier only

The Photographs Contained In This Technical Installation Manual Are Taken From An Actual Fire Test Build-up

Bulkhead and ceiling specimen buildup complete

Specimen being lifted onto the furnace

The timber floor was point loaded with 1.7 tonne of concrete

At the start of the test

At 2 hours and 2 minutes

Test terminated at 2 hours 40 minutes